



DIE CASTING

## voestalpine WATER JACKETS - AM designed for pure performance

Over the years, our customized water jackets have proven their superior quality worldwide in the automotive industry.

### YOUR ADDED VALUE

voestalpine AM Water Jackets are exchangeable tool inserts used for casting aluminum engine blocks. The curved walls of this important component are very thin and generally vary in thickness from top to bottom. To fully leverage this complex form, a superior solution is required. We offer this through a combination of **premium materials by BÖHLER/Uddeholm**, voestalpine heat treatment, final machining, eifeler PVD coating, and customized conformal cooling.

Our additively manufactured (AM) Water Jackets offer outstanding high-temperature wear resistance, excellent ductility (gross crack resistance), premium tempering resistance, significant soldering reduction, high heat-checking resistance, as well as high thermal conductivity. These superior properties enable reduced downtime, maintenance effort and cycle time, thereby substantially increasing OEE.

#### Main Properties

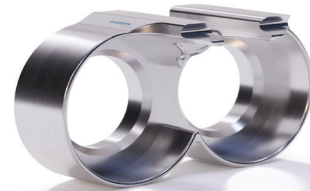
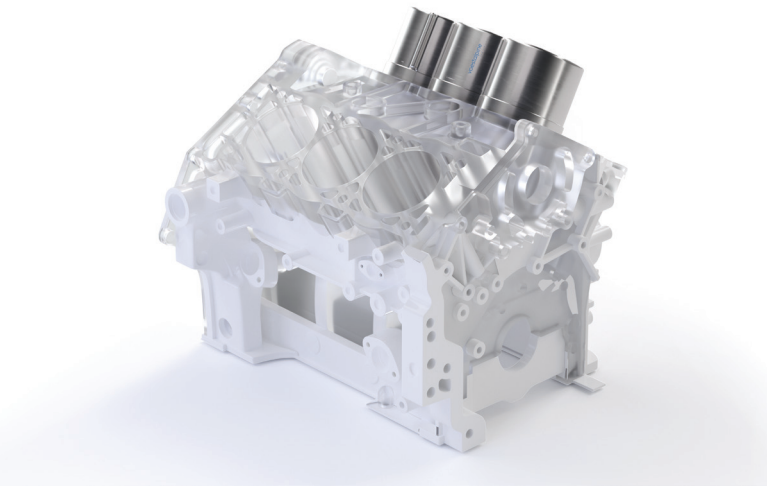
Outstanding high-temperature resistance

Premium temper back resistance

Excellent ductility (safety against cracks)

High soldering resistance

High thermal conductivity



## INDUSTRIAL PERFORMANCE COMPARISON

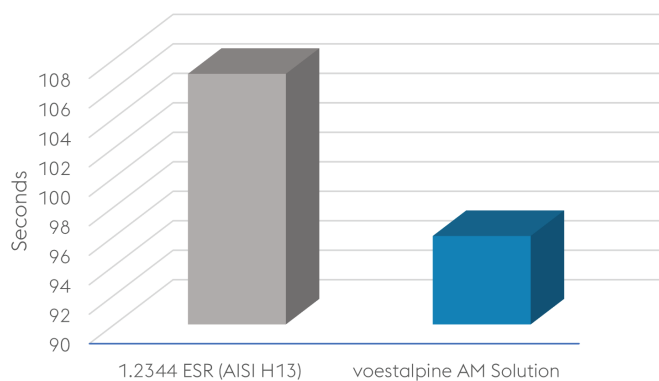
- » Increased lifetime
- » Reduced cycle time
- » Reduced maintenance and cleaning effort
- » Reduced fluctuations in casting quality

## OUR MATERIALS

C	Si	Mn	Cr	Mo	V
0.50	0.20	0.25	4.50	3.00	0.60

C	Si	Mn	Ni	Mo	Co	Ti
≤0.03	≤0.10	≤0.15	18.00	4.90	9.30	1.10

Cycle Time Improvement



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**voestalpine**

ONE STEP AHEAD.